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ABSTRACT

Two approaches to spelling instruction were compared to determine which approach produced the more competent spellers. Twenty-five fifth grade students participated in a five-month program. The control group continued spelling instruction using a traditional workbook, while the experimental group was taught spelling with an individualized approach. The individualized method was founded on the formation of individual word lists from the students' active writing vocabulary. Both groups were involved in peer study experiences and student participation in evaluation and record keeping. The findings indicated no significant difference in the spelling abilities of the two groups. (Author/RL)

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DO FIFTH GRADE STUDENTS LEARN TO SPELL BETTER USING AN INDIVIDUALIZED APPROACH OR A TRADITIONAL WORKBOOK APPROACH?

by

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Formal spelling instruction usually begins at the end of Grade 1 or at the beginning of Grade 2. One of the many basal spelling series that are commercially available will probably be used when the teaching of spelling is initiated. Not as often, students are taught to spell words from lists that are supposedly geared to grade level. Spelling instruction may also be completely individualized or, occasionally, no spelling instruction is attempted at all.

In a preliminary study on the effects of basal spelling series it was found that after Grade 4 no spelling instruction is almost as effective as special instruction (Hammill, 1977). The results of a study by Beers, Beers and Grant (1977) on the misspellings of children indicated that children acquire their own systematic strategies for spelling in a developmental way. Other studies are concerned with the demand for correct spelling and its' negative influence in children's writing (Cramer, 1976). We are also faced with the research of Ernest Horn in 1957 who concluded that no one can be assured of the correct spelling of a word that has not been examined specifically for spelling. The whole point in learning to spell is to be an effective writer.

This study will be useful to teachers and educators who are searching for a more effective way to teach spelling. The teaching of spelling is often confined to the rote memorization of words. Very often these words have little or no meaning or interest to the student and he/she may have a difficult time concentrating on an assigned task. There may

also be less retention and carry-over in written work as a result of memorization. Every area of study needs a purpose in order to be performed effectively. Unfortunately spelling is not a priority of many teachers or students. Recent studies have noted the decline of spelling skills as well as reading skills among today's students.

Many words may be assigned to a student who has already acquired them as part of his/her overall spelling vocabulary. Repetition in learning words already mastered is unnecessary, time consuming and of little interest to a student. The use of an individualized spelling approach may produce greater academic achievement and also result in a more positive attitude toward spelling among teachers and students. Students working with a meaningful spelling vocabulary may demonstrate more interest which could encourage motivation and produce increased spelling skills. If this proves true, it would certainly warrant more detailed research on the subject.

Hypothesis

This study is directed towards the comparison of two spelling instruction approaches. It is hypothesized that there will be no significant difference in the spelling achievement of a sample of fifth grade pupils taught using an Individualized Approach when compared to the achievement of a sample using a Traditional Workbook Approach.

Definitions

Academic Achievement - a score on a standardized achievement test measured by alternate forms of the Iowa Test of Basic Skills (Spelling Subtest).

HJ Core List - refers to the Harris-Jacobson Core List.

Intelligence - a score on a standardized intelligence test measured by the Cognitive Abilities Test.

Individualized Approach - a program of obtaining spelling words to fit each student individually.

Traditional Workbook Approach - a program of teaching spelling through a published workbook (Kottmeyer).

Sample and Instructional Procedures

A heterogeneous fifth grade class provided the sample used in this study. The students were randomly grouped using the Table of Random Permutations (Moses, 1963). Scores from the Iowa Test of Basic Skills from fourth grade were used to measure achievement in spelling. Scores from the Cognitive Abilities Test provided the information about the intelligence quotients.

Group I (traditional) were taught spelling using a traditional workbook approach (Basic Goals in Spelling, Kottmeyer). One unit consisting of twenty words and appropriate workbook pages were introduced each week adhering strictly to the teacher's edition. Group II (individualized) were taught spelling using an individualized approach

adhering to the following generalizations.

Every child received a list of ten words each week. These words were drawn from all areas of his/her written work and recorded on a master list kept by the teacher. When in need of additional words the HJ Core List was utilized. Words were selected on a random basis using the appropriate grade list (according to each individual's grade equivalent score on the ITBS). Voluntary word contributions were always accepted.

Each day a writing assignment was posted (the traditional group received the same assignment). The following is a list of activities utilized by the experimental sample in learning to spell a word:

1. write each word four times each
2. write each word in a meaningful sentence
3. list the words alphabetically
4. make "Who or What Am I" riddles
5. write a story or poem using some of the words
6. dictionary skills
    a. pronunciation
    b. definition
    c. part of speech
    d. guide words

A homogeneous (student with similar spelling ability) study partner was assigned to each student. These partners helped each other study the list of words and administer, correct and score each other's test at the end of the week.

Color groups designed to include high, average and low ability spellers were utilized to promote friendly competition and interest. Five groups were utilized and the total percentage of all test scores of the group were graphed on a chart displayed in the classroom for each color group. The winning color group received a "reward" each week. Every student maintained a spelling folder. An individual graph was kept by each student to chart his/her progress. Previous weeks' lists and spelling tests were also kept here. Any misspelled word on the post test was repeated on the child's word list for the following week. This was done to ensure constant reinforcement with problem words that the students used in their writing. A spelling dictionary was constructed and kept by each student. All spelling words were entered to serve as a ready reference and reinforcement tool. An alternate form of the ITBS was administered at the end of the study.

Assumptions and Limitations

It was assumed that the Tables of Random Permutations, used to divide a group of twenty-four fifth grade students, has produced the best random grouping in both intelligence and spelling skills and that the sample used in this study was significant to its findings. It was also assumed that the words taught in Kottmeyer and Claus's Basic Goals in Spelling were appropriate for this level and that unprejudiced teaching was upheld throughout this study. Also, the time allotted

for this study hindered a more comprehensive examination of the two approaches being compared.

Presentation and Analysis of Data

As noted in table one, the primary analysis of the data was made utilizing four t-tests to determine the significance of differences between the means of the

Table I

Summary of Mean Related Data

Variable	M	SD	t
Cognitive Ability			
Experimental	109.3	8.14	.054
Control	107.1	10.31	
Spelling Pre-Test			
Experimental	70.6	18.82	1.84
Control	57.3	13.30	
Spelling Post-Test			
Experimental	75.8	17.22	1.30
Control	66.1	17.08	
Spelling Pre-Post Difference			
Experimental	5.3	9.06	.700
Control	8.8	13.45	

experimental and control groups on the following:

1. cognitive ability
2. pre-program spelling scores
3. post-program spelling scores
4. differences between individual pre and post spelling scores

In each case the values obtained indicated no significant difference, therefore the null hypotheses must be accepted. According to this data, an individualized spelling program did not significantly improve the spelling ability of the experimental group.

A second form of analysis involved graphing the pre and post program scores of the experimental sample to determine whether there were interaction effects. This analysis is illustrated in Figure one. The students were ranked from lowest to highest according to their pre-program spelling scores. Pre and Post scores were plotted and lines of best fit were drawn. Since these lines ran approximately parallel, it was concluded that there was no interaction between the experimental method and the spelling skills of individual students. In other words, the treatment was equally effective or non-effective for the weakest as well as the strongest pre-program speller.

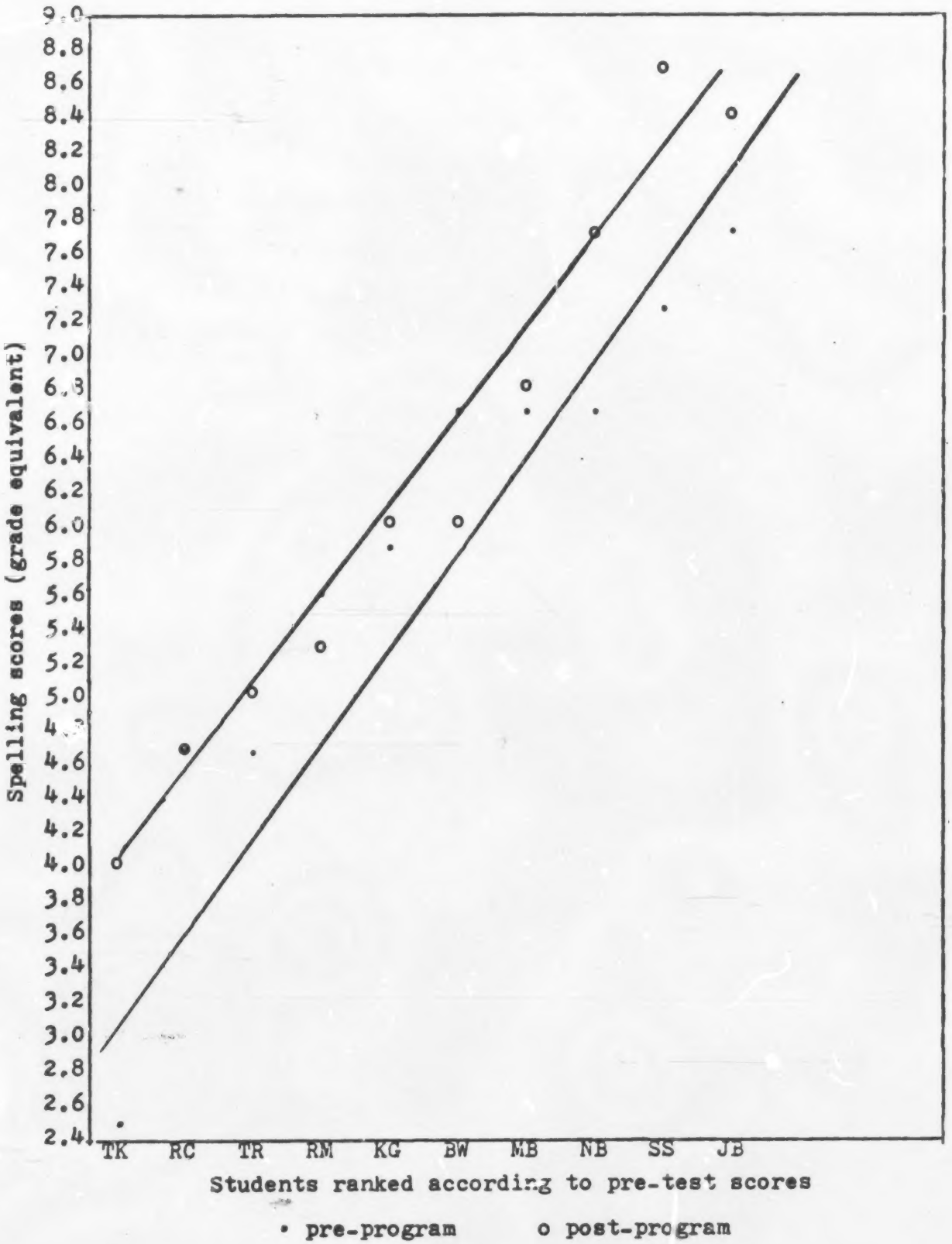
Summary and Conclusions

This study was designed to determine the value of an individualized approach to the teaching of spelling. Previous research indicated that student approaches to spelling are multiple, that no single method is expecially effective, that levels of spelling ability are diverse within any grade group, and that the vast majority of published materials are not based on spelling research but traditional practices.

The salient characteristics of the instructional method

Figure I

Interaction Effects in Experimental Group



used during this study was the formation of spelling lists primarily from the writing and classroom questions of the students in the experimental group. Word lists for the control group were taken from the Kottmeyer spelling workbook. Both groups experienced peer interaction during study and testing sessions and student participation in correcting tests and keeping progress records.

The class was randomly divided. A spelling pretest and intelligence tests were administered before the onset of the study. Each group was taught according to the procedures outlined for that specific group in the Instructional Procedures section of this paper. At the conclusion of the study a spelling post-test was given to determine their growth in spelling. When the test results of both groups were analyzed no significant difference was apparent between the samples.

The results of this study support the original null hypothesis that there will be no significant difference in the spelling achievement of a sample of fifth grade pupils taught using an individualized approach as compared to a traditional workbook approach.

Variables that may have influenced the performance of the experimental group might have been the small size of the sample used, the limited amount of time during which students were exposed to the alternate teaching method, and the advantage of the control group in continuing, without

interruption, a program they had been familiar with in previous years. Perhaps a future study should be conducted in the first grade with a population that has had no previous experience with a structured spelling program. Another variable causing both groups to grow at a non-significantly different rate may have been the emphasis on peer grouped study and testing, and student participation in correcting tests and keeping progress records.

An interesting expansion of this study might be to grade the creative writing samples of the experimental and control groups. The experimental group was learning to spell the words they frequently misspelled in their writing as opposed to the control groups words which were selected from a spelling workbook. In the former case the words were more meaningful to the students and were respelled correctly when re-used as part of their writing vocabulary.

The conclusions of this study are restricted to the population actually investigated. Perhaps, judging from the results of this study no one method of teaching spelling is significantly better. Perhaps, the answer is to make use of research related practices or make use of any approach to spelling whereby the individual child learns to spell.

INDIVIDUALIZED SPELLING: RELATED RESEARCH

Spelling defined

Most definitions do not capture the full essence of the spelling process. For example, Hanna, Hodges, and Hanna define spelling as the "process of encoding, or of rendering spoken words into written symbols." Similarly, Brueckner and Bond define spelling as the "ability to produce in written or oral form the correct letter arrangement of words." Neither of these definitions is complete. Spelling is not based upon a single act but requires a variety of skills euphemistically called spelling. For the purpose of this study, spelling is defined as the ability to recognize, recall, reproduce, or obtain orally or in written form the correct sequence of letters in words (Graham, 1979).

History

The simple speller was the single, most important resource in the American educational system from colonial times well into the nineteenth century. The spelling book did not just teach spelling; it presented lessons in reading, elocution, grammar, geography, and arithmetic as well (Towery, 1979). Early spellers were merely collections of lists necessitating meaningless rote learning and recitation. Often the words in the lists had little to do with the child's personal or social needs. The interest in child psychology and in J.M. Rices sixteen month drill of lists of words which have no practical value pointed out that more time and thought needed to be spent on how and what words to present to the

child (Towery, 1979). In the classrooms at the turn of the century, no one method of presentation predominated and overshadowed the use of all others (Towery, 1979).

Traditionally, American educators have taught spelling using textbooks with lists of words selected by various criteria (Cramer, 1976). For the past thirty-five to forty years the schools have done an excellent job of creating phonetic misspellers. Why should this be, when research in the area of spelling is more clear and in more agreement than that in any other area of education? The obvious reason is that, if all one wants to do is teach spelling, there is no way to justify a spelling book. Publishers of spelling programs would be out of business (Hillerich, 1977). The history of spelling books can be traced from Webster's blue-black speller to the profusion of spelling material available today (Cramer, 1976).

Methods of instruction

Before direct spelling instruction is planned, the student must be intellectually able and emotionally willing to learn. Students who have not attained sufficient mental maturity and linguistic experiences are scarcely ready to participate in a formal spelling program. How is spelling readiness assessed? Read, Allred, and Baird recommend that students should be able to: (a) name and write all the letters of the alphabet, (b) copy words correctly, (c) write their names from memory, (d) enunciate words clearly,

(e) recognize common letter-sound combinations, (f) write a few words from memory, and (g) demonstrate an interest in spelling. If students do not meet these criteria, they should take part in activities aimed at developing spelling readiness (Graham, 1979).

Many researchers are of the opinion that commercial spelling programs are not effective in teaching spelling. They have emphasized that more efficient strategies for spelling should be taught and that the particular words taught should be those which a particular group of children uses with high frequency. Other considerations deemed important are that spelling should be taught for purposes of efficient written expression and that the development of a desire to spell correctly should be fostered.

In his article R.L. Cramer states that the demand for correct spelling is the most common obstacle in children's writing. He feels that in order to foster writing and spelling competence, teachers should encourage children to spell words as best they can. Teachers must be willing to tolerate misspellings as this will promote fluency in independent writing and open the way for children to experiment with the relationships between letters and sounds in a natural way.

In a preliminary study on the effects of spelling instruction (Hammill, 1977) it was found that after Grade 4 no spelling instruction is almost as effective as special instruction. In an attempt to further explain this finding,

they indicated that teachers identify the good spellers around Grade 5 and decide that they do not need special instruction any longer. This would account for the high level of spelling ability among the children who received no spelling instruction. They further concluded that more extensive research is needed. This same study cited Basic Goals in Spelling by Kottmeyer (the basal spelling series used for this study) as incorporating aspects of linguistics theory. It presents two kinds of lists: basic word lists and word lists for enrichment. The basic words are chosen because research revealed that they are commonly used in the writing vocabulary of pupils at each level. Morphological relationships are included, but according to the author, the series stresses sound-symbol relationships that indicate the importance of phonology. Rather than having the teacher present spelling rules for the pupils to memorize, the authors stress the importance of having pupils observe similarities in the sound and the spelling of words and formulate generalizations, or rules, on their own. According to their study, it was also indicated that for Grades 5 and 6, Basic Goals in Spelling is the least effective means of instruction. In fact, no instruction seems to yield better results than this program.

Learning to spell involves learning about words, their components, and the relationships among those components, whether they be letter-sound correspondences, syntactic considerations, or morphemic elements. Teaching spelling,

therefore, should not be separated from word recognition skills and should be part of any word exploration that occurs in a classroom (Beers, 1980).

Gentry and Henderson describe developmental stages of spelling and suggest several steps to becoming a better teacher of spelling, reading, and writing through encouraging creative writing in children, de-emphasizing the expectation of standard spelling in primary grade children, and developing the competency to respond to children's nonstandard spelling appropriately (Blair, 1980).

How spelling is taught ranges from focusing on word parts to emphasizing whole language development by incorporating spelling instruction with the other language arts. Considerable controversy surrounds many existing and proposed spelling programs. Most elementary teachers view the improvement of spelling ability as a definite basic need. Researchers have been seeking practices that will lead to spelling improvement. Concentrated efforts in the study of language in the past twenty years have aided this process (Blair, 1980).

Wenzel (1977) reports that research and methods for building competency in spelling have yielded information in three areas: word selection, generalizations to be taught, and application of spelling skills to writing. First, research on word selection indicates that teachers should chose basic high-frequency words for children to learn to spell and give special attention to words that are persistently

misspelled. Second, spelling generalizations should be taught in conjunction with the use of whole-word techniques. Third, it is essential to teach spelling in conjunction with functional writing.

Spelling is a traditional element of the elementary school curriculum, where a considerable amount of time and energy are devoted to its mastery. Unfortunately, many school age children have difficulty learning to spell. There is also an ever present and growing concern that our school's spelling achievement is lower than it was 30 or 40 years ago (Graham, 1979). Unsatisfactory spelling progress may be attributed, in part, to inadequate contemporary classroom instruction, poorly designed commercial materials, and the absence of spelling programs based on research findings. Further, contemporary classroom instruction rarely accounts for individual student differences. Children do no learn at the same rate nor do they encounter the same difficulties in learning to spell (Graham, 1979).

The actual spelling procedures used in many classrooms are influenced heavily by commercial materials that form the foundation of most spelling programs. Teacher proof materials with little diversity might be acceptable if the content were appropriate. Regretfully, this is not the case. Results of the Cohen and Graves studies point to the need for re-evaluation of spelling texts and their contents (Graham, 1979).

In another article Robert L. Hillerich (1977) states that to justify their existence, most spelling programs

devote their efforts to teaching various kinds of generalizations with the intent of enabling children to spell words they have never studied specifically for spelling. On the other hand, we've known since the research of Ernest Horn in 1957 that no one can be assured of the correct spelling of a word that has not been examined specifically for spelling. It is simple to come up with phonetic possibilities, but impossible to be certain of the correct spelling. The whole point in learning to spell is to be an effective writer.

The results of a study by Beers, Beers and Grant (1977) on the misspellings of children indicated that children acquire their own systematic strategies for spelling in a developmental way. Two main conclusions can be drawn from their study. The primary conclusion is that, regardless of the type of instruction, children use three clearly defined spelling strategies when trying to spell words. The first strategy is a heavy reliance on pronunciation of letter names to represent vowel sounds. The second strategy is the insertion of an incorrect vowel after a correct vowel. The third strategy is the incorrect substitution of one short vowel for another short vowel. The second major conclusion is that even though children have demonstrated an ability to use more advanced strategies with words they know, they revert to a more primitive strategy when confronted with words they do not know.

In planning a curriculum, there are two major theories

based on divergent views regarding the consistency of English orthography. One theory holds that the orthography is irrational and consequently difficult to master. This theory is responsible for the two distinct methodological interpretations that (a) instruction should be based on a special synthetic alphabet (e.g. Initial Teaching Alphabet); and (b) whole words should form the core of the spelling curriculum. At present, however, special synthetic alphabets are not a viable or pragmatic approach to spelling instruction because of the transition from the synthetic alphabet to English orthography. The whole word approach also appears to be impractical. To be an effective speller, a student does not have to be able to correctly spell all the words in his/her listening, reading, and writing vocabulary. Studies by E. Horn, Fitzgerald, T. Horn and Otto, and Rinsland indicate that a basic spelling vocabulary of 2,800 to 3,000 well-selected words should form the core of the spelling program. To require a student to master a spelling vocabulary significantly larger than 3,000 words is out of harmony with research (Graham, 1979).

The second theory views English orthography as a patterned but incomplete system. Supporters of this theory suggest that the systematic properties of orthography should be used in spelling instruction. This rule stresses the application of phonics and spelling rules as a means of developing spelling abilities. A large body of research supports the contention that intensive phonics instruction

creates greater gains in spelling than non-phonic approaches (Baker, Block, Dunwell, Gold, Russell, Thompson). Some evidence shows that children learn the more essential phonic principles whether or not formal instruction in phonics is offered (Schwartz and Doehring, Templin). Both theory and evidence suggest that phonics instruction may be of some benefit in learning to spell (Graham, 1979).

The issue surrounding use of spelling rules is more clear cut: Only those rules, with few exceptions, that apply to a large number of words should be taught. Spelling rules, as a whole, are deemed not very useful in improving overall spelling achievement (Dorics, King, Turner, Warren). Since correct spelling in place of phonetic misspelling is a major goal in spelling instruction, only essential phonic skills and spelling rules are incorporated into the curriculum. Spelling rules are limited to the following:

- Proper nouns and most adjectives formed from proper nouns begin with capital letters.
- Rules for adding suffixes (changing y to i, dropping final silent e, doubling the final consonant).
- The use of periods in writing abbreviations.
- The use of the apostrophe to show possession.
- The letter q is followed by u in common English words.
- English words do not end in v. (Graham, 1979)

After all methods of instruction are investigated, it is inherent that spelling instruction must be individualized. A wide range of spelling ability and achievement is apparent

at every grade level (Ager, Horn). The skills and needs of each student are different. Gruler and Lease found that pupils at all levels of spelling ability benefited from a program based on individual needs and made substantially greater gains than students receiving instruction formulated on a conventional group basis (Graham, 1979). By analyzing individual student problems and allowing students to study the words they need, you can make spelling special for each student (Fisher, 1980; Graham, 1979). Hillerich (1977) also suggested that an effective spelling program should be based on a good word list and should provide for the development of a "spelling conscience."

Another study by Gilbert Stefanides (1976) is an evaluation of achievement and attitudes of students and teachers using an individualized spelling approach. He suggests that there is a correlation between the improvement he noted in an individualized approach and the fact that any program which is new, and which receives enthusiastic attention from teachers, might motivate increased achievement and more positive attitudes.

Based on a study of the findings of a variety of researchers, Hinrichs (1975) concluded that commercial spelling programs were not effective, but rather, "a good spelling program included three components, none of which is a textbook." The three components are as follows: (1) a list of high frequency words, appropriate to the age, grade and developmental levels of the learners, (2) a test-study-

test teaching procedure which emphasizes self-correction, and (3) the inclusion of visual, auditory and kinesthetic modes in the learning process. Spelling needs to be examined in light of what it can tell children about words in their writing and their reading (Beers, 1980).

Research

The following list was compiled by Graham (1979) and consists of spelling practices supported by research and those not supported by research. Readers interested in a more thorough discussion of research supported practices are referred to Fitzsimmons and Loomer (1977).

Procedures Supported by Research

1. The test-study-test method is superior to the study-test method (Blanchard, C. Edwards, Fitzgerald, Gates, Hibler, T. Horn, Kingsley, Montgomery, Subik, Yee).
2. Learning spelling words by a synthetic approach is a better technique than learning words by syllables (T. Horn, Humphry).
3. It is more efficient to present words for study in a list or column form than in sentence or paragraph form (M. Edwards, Hawley & Gallup, E. Horn, McKee, Strickland, Winch).
4. The single most important factor in learning to spell is the student correcting his or her own spelling test under the teacher's direction (Beseler, Christine

& Hollingsworth, T. Horn, Louis, Schoephoerster, Thomas, Tyson).

5. Spelling games stimulate student interest (Fitzgerald, E. Horn, T. Horn).
6. Sixty to 75 minutes per week should be alloted to spelling instruction (E. Horn, T. Horn, Larson, Rieth, Axelrod, Anderson, Hathaway, Wood, Fitzgerald).

Procedures Not Supported by Research

1. Writing spelling words in the air is a valuable aid in learning new words (Petty & Green).
2. Studying the "hard spots" in words improves spelling ability (Masters, Mendenhall, Rosemeier, Tireman).
3. Students should devise their own method for studying spelling words (Fitzgerald, E. Horn, T. Horn).
4. Student interest in spelling is secondary to rewards received for achievement in spelling (Columba, Diserens & Vaughn, Foriano, E. Horn, D. Russell, Thorndike).
5. Writing words several times ensures spelling retention (Abbott, Petty & Green, E. Horn).

As disturbing as it may seem, evidence reveals that instructional practices in spelling are influenced more by habit than by research results. In a study involving 1,289 second through sixth grade elementary teachers, Fitzsimmons and Loomer found that teachers seldom use research-supported practices in their classrooms. Improvement in spelling programs is not commensurate with research efforts. A solid

research foundation already exists, and the Elementary and Secondary Education Act created a landslide of spelling techniques, approaches, and materials. Spelling instruction should be teacher directed, should contain a variety of relevant instructional options, and should be based on a foundation of research evidence (Graham, 1979).

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